

"Express Mail" Label No. EV 330860103US

Date of Deposit March 2, 2004

PATENT

Attorney Docket No.: 016866-000211US

This is being deposited with the United States Postal Service "Express Mail  
Post Office to Address" service under 37 CFR 1.10 on the date indicated  
above and is addressed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Brian T. Chait, et al.

Continuation of Application  
No. 09/828,326

Filed: April 5, 2001

For: METHOD FOR DETECTING  
POST-TRANSLATION  
MODIFICATIONS OF PEPTIDES

Examiner: Delacroix Muirhei, Cybille

Art Unit: 1614

INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR §1.97 and  
§1.98

---

MAIL STOP Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. In accordance with 37 CFR §1.98(d), copies of the references can be found in Application No. 08/341,555, filed 11/23/94 (Attorney Docket No. 016866-000200US). It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

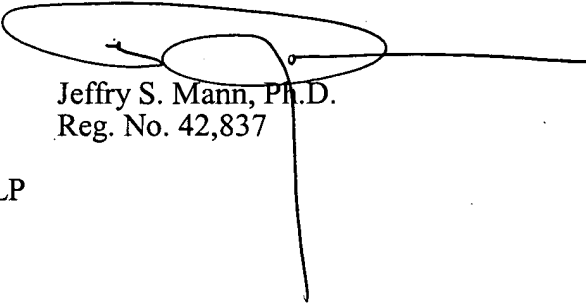
As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no

representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement.

However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Jeffrey S. Mann, Ph.D.  
Reg. No. 42,837

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, California 94111-3834  
Tel: 415-576-0200  
Fax: 415-576-0300  
JSM:kad  
60149942 v1

Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>			<b>Complete if Known</b>	
			Application Number	Continuation of Appl. No. 09/828,326
			Filing Date	April 5, 2001
			First Named Inventor	Chait, Brian T.
			Art Unit	1614
Examiner Name	Delacroix Muirhei, Cybille			
Sheet 1 of 3	Attorney Docket Number 016866-000211US			

U.S. PATENT DOCUMENTS*					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code <sup>2</sup> (if known)			
	AA	US-5,118,937	6/2/92	Hillenkamp et al.	
	AB	US-5,045,694	9/3/91	Beavis et al.	
	AC	US-5,281,538	1/25/94	Cottrell et al.	
	AD	US-5,288,644	2/22/94	Beavis et al.	

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	AE	EP	529 604 A1		3/3/93	Seiko Instruments Inc.		<input type="checkbox"/>
	AF	PCT	WO 94/06017		3/17/94	Selectide Corporation		<input type="checkbox"/>
								<input type="checkbox"/>

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

60149942 v1

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	Continuation of Appl. No. 09/828,326	
			Filing Date	April 5, 2001	
			First Named Inventor	Chait, Brian T.	
			Art Unit	1614	
			Examiner Name	Delacroix Muirhe, Cybille	
Sheet	2	of	3	Attorney Docket Number	016866-000211US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	AG	SMITH, L.A. et al., "Following Enzyme Catalysis in Real-Time Inside a Fast Atom Bombardment Mass Spectrometer" <i>Biomed. Mass Spectrom</i> 10:98 (1983)		
	AH	TARR, G.E. "Improved Manual Sequencing Methods" <i>Methods Enzymology</i> 47:355 (1977)		
	AI	KENT, S.H. "Chemical Synthesis Of Peptides And Proteins" <i>Annual Rev. Biochem.</i> 57:957-984		
	AJ	TSUGITA et al "C-terminal sequencing of protein: A novel partial acid hydrolysis and analysis by mass spectrometry" <i>Eur. J. Biochem.</i> 206:691-696.		
	AK	CHAIT et al. "A New Approach For Sequencing Peptides and Proteins" <i>The 40th ASMS Conference</i> , June 5, 1992 pgs. 1939-1940 (1992)		
	AL	BEAVIS et al. "α-Cyano-4-hydroxycinnamic Acid as a Matrix for Matrix-assisted Laser Desorption Mass Spectrometry" <i>Organic Mass Spectrometry</i> 27:156-158 (1992)		
	AM	AEBERSOLD et al. "Design, synthesis, and characterization of a protein sequencing reagent yielding amino acid derivatives with enhanced detectability by mass spectrometry" <i>Protein Science</i> 1:494-503 (1992)		
	AN	SCHNOLZER et al. "In situ neutralization in Boc-chemistry solid phase peptide synthesis" <i>Int. J. Peptide Protein Res.</i> 40:180-193 (1992)		
	AO	CHAIT et al. "Weighing Naked Proteins: Practical, High-Accuracy Mass Measurement of Peptides and Proteins" <i>Science</i> 257:1885-1894. (1992)		
	AP	HILLENKAMP et al. "Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry of Biopolymers" <i>Anal. Chem.</i> 63:1193-1202 (1991)		
	AQ	BEAVIS et al. "High-Accuracy Molecular Mass Determination of Proteins Using Matrix-Assisted Laser Desorption Mass Spectrometry" <i>Anal. Chem.</i> 62:1836-1840 (1990)		
	AR	BEAVIS et al. "Factors Affecting the Ultraviolet Laser Desorption of Proteins" <i>Rap. Comm. Mass Spec.</i> 3:233 (1989)		
	AS	BEAVIS et al. "Matrix Assisted UV Laser Desorption Of Biologically Interesting Molecules" <i>The 37th ASMS Conference, Miami Beach, FL</i> , pg. 1186-1187 (May 21-26, 1989)		
	AT	NOREN et al, "A General Method for Site-Specific Incorporation of Unnatural Amino Acids into Proteins" <i>Science</i> 244:182-188 (1989)		
	AU	KARAS et al "Matrix-Assisted Ultraviolet Laser Desorption of Non-Volatile Compounds" <i>International Journal Of Mass Spectrometry and Ion Processes</i> , 78:53-68 (1987)		
	AV	CHAIT et al., "Mass Spectrometric Characterization Of Microscale Enzyme Catalyzed Reactions Of Surface-Bound Peptides And Proteins" <i>Methods In Protein Sequence Analysis</i> ed K.A. Walsh, The Humana Press pgs. 483-492 (1986)		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

<sup>1</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>2</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	Continuation of Appl. No. 09/828,326	
			Filing Date	April 5, 2001	
			First Named Inventor	Chait, Brian T.	
			Art Unit	1614	
			Examiner Name	Delacroix Muirhei, Cybille	
Sheet	3	of	3	Attorney Docket Number	016866-000211US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	AW	KARAS et al. "Influence of the Wavelength in High-Irradiance Ultraviolet Laser Desorption Mass Spectrometry of Organic Molecules" <i>Anal. Chem.</i> , 57:2935-2939 (1985)		
	AX	SELF, R. et al., "The Combined Use of Enzymatic Hydrolysis and Fast Atom Bombardment Mass Spectrometry for Peptide Sequencing" <i>Biomedical Mass Spectrometry</i> 10:78-82 (1983)		
	AY	WATSON, J.D. et al. "Restriction Fragments Lead to Powerful New Methods for Sequencing DNA" <i>Recombinant DNA - A Short Course</i> , W.H. Freeman and Co., New York. pgs 61-63 (1983)		
	AZ	TSUGITA et al "Exopeptidase Digestion In Combination With Field Desorption Mass Spectrometry For Amino Acid Sequence Determination" <i>FEBS</i> 137:19-24 (1982)		
	BA	STRYER, L. <i>Biochemistry</i> , 2nd Ed., W.H. Freeman and Co., New York, pg. 663 (1981)		
	BB	SCHROEDER, W. "Degradation of Peptides by the Edman Method with Direct Identification of the Phenylthiohydantoin-Amino Acid" <i>Methods in Enzymol.</i> 25:298-313 (1972)		
	BC	RICHARDS, F. et al., "Mass Spectroscopy of Methylthiohydantoin Amino Acids: Identification, Quantitation, and the Analysis of Mixtures" <i>Methods in Enzymol.</i> , 25:314-325 (1972)		
	BD	KONIGSBERG, W. "Subtractive Edman Degradation" <i>Methods in Enzymol.</i> 25:326-332 (1972)		

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.